Comments on Draft EWA Conclusions to Date and Implementation Plan, 21 July version. K. Halupka

## General comments

- 1. The overall approach to general conclusions laid out by Jim Buell at the end of Thursday's meeting is superior to the approach to General conclusions in the draft. Some of the bulleted items in the draft are low in information content or characterize the EWA concept in what I think are surprising and inaccurate ways. Perhaps these conclusions have been "boiled down" too far. For example, I do not consider increased export capacity and JPOD to be key features of the EWA. They are key features of the CalFed program, and negotiated access to these tools will be useful to EWA implementation. Another example is the 4<sup>th</sup> bullet; "In the early stages of the EWA, funds to purchase water are essential." This is true, but so obvious it provides little info. This statement also implies that funds for purchase are not essential in later stages. I feel the more important issue is that, given EWA reliance on funds to purchase water, the availability of water for purchase and the effects of EWA purchases on water market dynamics require further investigation.
- 2. The "specific" conclusions more closely approximate the appropriate level of detail that should be presented for all conclusions.
- 3. Each of the Problems/issues/constraints could be introduced with a brief title; e.g., Water Supply, Water Quality, EWA Assets and Debt, etc.

## Specific comments

- 1. Conclusions, general, first bullet. The final phrase, "funds that can be used to purchase other environmental benefits" does not reflect what we have done with EWA assets in simulations to date. Discussions about DNCT Hypotheses have included recommendations that actions other than export control should be investigated in terms of their efficiency in providing benefits to listed species, but this is not a conclusion drawn from EWA simulations.
- 2. Conclusions, general, 5th bullet. Replace "maximum" with "optimum." Again this has been boiled down too far. One is left wondering, "so what?" More detail is necessary to make this conclusion meaningful. How will these innovative options be explored?
- 3. Specific hypothesis 8. Delete most of the adverbs from the conclusion and its elaboration; "severely," "significantly," "likely further,", etc.
- 4. Specific hypothesis 9. This is true, but a more fair comparison would require an additional game that has not been conducted. The necessary game would involve beginning with the FWS/NMFS prescriptive standards and using the salvage record to relax or flex these standards. The outcome of this approach should be used to determine the relative efficiency of both fish protection and water supply.

- 5. Problems, etc., 1. Suggested rewording: "EWA simulations did not satisfy water user goals for increased deliveries." The elaboration should point out that simulations did provide more water than the historic record, but this amount of increase was considered insufficient by water users.
- 6. A possible additional item; "Monitoring of fish migration timing and distribution, which is necessary to achieve the expected protection efficiency benefits of the EWA, will be technically and logistically difficult and costly.

Natural variability in the timing and distribution of migratory and resident fish will need to be accurately tracked in order to implement protective measures in a timely way. The EWA cannot succeed in protecting fish at low water-supply costs without accurate monitoring, but the capacity to achieve the necessary level of monitoring resolution for rare species is uncertain. Emphasizing efficiency of protection increases risks for subpopulations that have atypical timing or distribution patterns."